

REMARKS

Claims 22-41 are still pending in this application.

In the Office Action, the Examiner rejected claim 22 under 35 U.S.C. Section 112, first paragraph, as non-enabling. In particular the Examiner asserted that the feature "said sound inlet having an acoustic resistance which is less than the acoustic resistance of the damping element" is non-enabling. Applicant respectfully disagrees.

For the Examiner's convenience, Applicant has enclosed pages 86-89 of "Elements of Acoustical Engineering" by Harry F. Olson, 1940 which explains the well-known concept of acoustic resistance (impedance). As equation 5.1 shows, the acoustic resistance is dependent on various factors including the radius of a tube, frequency, length and density. Applicant submits that a person of ordinary skill in the acoustics art will be able to design a sound inlet and damping element of appropriate resistance by varying one or more of the factors described above. Accordingly, Applicant respectfully requests withdrawal of the non-enabling rejection.

The Examiner rejected claims 22-28, 31, 32, 34, 35, 37 and 38 under 35 U.S.C. Section 103 over Uzawa (US Patent No. 5148492) and also rejected the remaining claims over Uzawa in view of Chang (US Patent No. 5781644). Applicant respectfully traverses the rejections.

As claimed in 22 and seen in Figures 1 and 2 of the present application, the sound waves to be picked up by the microphone diaphragm 3 are passed through the slot-shaped sound inlet 25 forming an acoustic inductance so that the sound waves are delayed before they reach the second diaphragm surface. Accordingly, such an arrangement forms an LR circuit, since the sound waves at the sound inlet 19 first pass through the acoustic inductance L (the slot-shaped sound inlet 25) and are then directed into the volume underneath the diaphragm 3. Thereafter, the sound waves pass via an acoustic resistance into the volume underneath. This arrangement achieves the desired microphone with directional effect.

In contrast to the above, the teachings of Uzawa well as Chang are related to a microphone with directional effect based on an RC principle which is entirely different from the LR principle. Here, the acoustic resistance is arranged in front of the sound inlet. Therefore, the sound waves have to pass through the acoustic resistance before they directly pass into the volume underneath the diaphragm, which acts as an acoustic capacitance C.

The Examiner stated that such a feature is not recited in claim 22. Applicant has amended claim 22 to make the feature more clear by reciting that "the sound waves to be picked up first

pass through said at least one slot-shaped sound inlet before reaching said at least one damping element”.

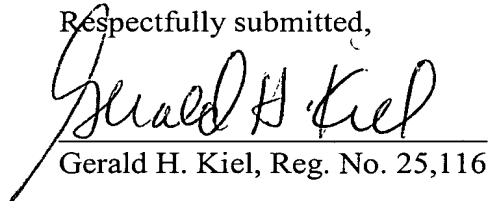
Therefore, claim 22 is not anticipated or made obvious by Uzawa or Chang or a combination thereof.

The remaining claims depend from claim 22 and are therefore also patentable by virtue of their dependency from claim 22.

Based upon the above amendments and remarks, Applicant respectfully requests reconsideration of this application and its earlier allowance. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite the prosecution of this application, the Examiner is urged to contact him at the number indicated below.

GHK/HKA

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Gerald H. Kiel", is written over a horizontal line.

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